

# M M Abid Naziri

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## About Me

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PhD Researcher specializing in **Software Testing** for learning-enabled systems. I develop automated testing techniques for Deep Learning Libraries (**PyTorch**, **TensorFlow**) and **Autonomous Driving Systems** in a simulation environment (**CARLA**). I have reported **102 bugs (78 confirmed)** to **PyTorch** and **TensorFlow** to date [\[list\]](#).

## Education

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NC State University, PhD in Computer Science (4th year) May 2027 (Expected)

Advisor: Dr. Marcelo d'Amorim

Award: Graduate Merit Award - Summer 2025

## Research Projects & Publications

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Testing Deep Learning Libraries via Neurosymbolic Constraint Learning ICSE 2026 (Accepted)

M M Abid Naziri\*, Shinhae Kim\*, Feiran Qin, Saikat Dutta, Marcelo d'Amorim

\*Equal contribution

Venue: [IEEE/ACM International Conference on Software Engineering \(ICSE 2026\)](#)

Misbehavior Forecasting for Focused Autonomous Driving Systems Testing ICSE 2026 (Accepted)

M M Abid Naziri, Stefano Carlo Lambertenghi, Andrea Stocco, Marcelo d'Amorim

Venue: [IEEE/ACM International Conference on Software Engineering \(ICSE 2026\)](#) [preprint]

BugsInDLLs: A Database of Reproducible Bugs in Deep Learning Libraries to Enable Systematic Evaluation of Testing Techniques ISSTA 2025

M M Abid Naziri, Aman Kumar Singh, Benjamin Wu, Feiran (Alex) Qin, Saikat Dutta, Marcelo d'Amorim

Venue: [The ACM SIGSOFT International Symposium on Software Testing and Analysis \(ISSTA 2025: Tool Demonstration Track\)](#) [pdf]

Evaluating the Effectiveness of Coverage-Guided Fuzzing for Testing Deep Learning Library APIs Submitted

Feiran Qin, M M Abid Naziri, Hengyu Ai, Saikat Dutta, Marcelo d'Amorim  
[\[preprint\]](#)

Evaluating the Effectiveness of Machine Learning to Improve Deep Learning Library Testing Submitted

Facundo Molina, M M Abid Naziri, Feiran (Alex) Qin, Alessandra Gorla, Marcelo d'Amorim

## Experience

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Senior Software Engineer, [Enosis Solutions](#) – Dhaka, Bangladesh Mar 2019 – Jul 2022

- Developed scalable web applications using Vue JS, TypeScript, and ASP.NET Core, including a project management tool deployed to **270** employees and a Welder Management system
- Developed desktop applications DesignCalcs and ProWrite for pressure vessel design, adding features, fixing bugs, and creating unit/regression tests
- Managed CI/CD pipelines, configured testing servers, and ensured smooth system operations
- Operated in an **Agile** development process in a development team of 7 people
- Mentored new recruits, conducted code/design reviews
- Collaborated with clients and team members via **JIRA**

## Technologies

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Languages: Python, R, C#, Delphi, Java, C/C++, JavaScript, TypeScript, Bash

Technologies: PyTorch, TensorFlow, CARLA Simulator, Docker, Github Actions, ASP.NET Core, React JS, Vue JS, TestComplete, DUnit